

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the present application.

1. (currently amended) A chimeric gene comprising:
a first DNA molecule encoding a hypersensitive response elicitor protein or polypeptide derived from a bacterial plant pathogen, which protein or polypeptide is characterized by containing substantially no cysteine, being glycine rich, heat stable, hydrophilic, and capable of eliciting a hypersensitive response in non-host plants,
a promoter operably linked 5' to the first DNA molecule to induce transcription of the first DNA molecule in response to activation of the promoter by an oomycete, and
a 3' regulatory region operably linked to the first DNA molecule.
2. (original) The chimeric gene according to claim 1 further comprising:
a second DNA molecule encoding a secretion signal polypeptide, the second DNA molecule being operably linked between the promoter and the first DNA molecule.
3. (previously presented) The chimeric gene according to claim 2, wherein the second DNA molecule encodes a secretion signal polypeptide comprising the amino acid sequence of SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, or SEQ ID NO: 17.
4. (previously presented) The chimeric gene according to claim 3, wherein the second DNA molecule comprises the nucleotide sequence of nt 8-110 from SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, or SEQ ID NO: 16.
5. (original) The chimeric gene according to claim 1, wherein the promoter is a *gstI* promoter.
6. (currently amended) The chimeric gene according to claim 5, wherein the *gstI* promoter comprises ~~the nucleotide sequence~~ nt 295-567 of SEQ ID NO: 9 ~~or promoter effective fragments thereof~~.
7. (previously presented) The chimeric gene according to claim 1, wherein the hypersensitive response elicitor protein or polypeptide is derived from a bacterial plant pathogen selected from the group consisting of *Erwinia*, *Xanthomonas*, *Pseudomonas*, and *Clavibacter*.

8. (original) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia amylovora*.

9. (previously presented) The chimeric gene according to claim 8, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising the amino acid sequence of SEQ ID NO: 3.

10. (previously presented) The chimeric gene according to claim 9, wherein the first DNA molecule comprises the nucleotide sequence of SEQ ID NO: 4.

11. (withdrawn) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia carotovora*.

12. (withdrawn) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia stewartii*.

13. (withdrawn) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia chrysanthemi*.

14. (withdrawn) The chimeric gene according to claim 13, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 1.

15. (withdrawn) The chimeric gene according to claim 14, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 2.

16. (withdrawn) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Pseudomonas syringae*.

17. (withdrawn) The chimeric gene according to claim 16, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 5.

18. (withdrawn) The chimeric gene according to claim 17, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 6.

19. (withdrawn) The chimeric gene according to claim 7, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Pseudomonas solanacearum*.

20. (withdrawn) The chimeric gene according to claim 19, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 7.

21. (withdrawn) The chimeric gene according to claim 20, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 8.

22. (previously presented) An expression system comprising a vector into which is inserted the chimeric gene according to claim 1.

23. (previously presented) A host cell comprising the chimeric gene according to claim 1.

24. (original) The host cell according to claim 23, wherein the host cell is a bacterial cell or a plant cell.

25. (original) The host cell according to claim 24, wherein the bacterial cell is an *Agrobacterium* cell.

26. (original) The host cell according to claim 24, wherein the host cell is a plant cell.

27. (previously presented) The host cell according to claim 26, wherein the hypersensitive response elicitor protein or polypeptide is derived from a bacterial plant pathogen selected from the group consisting of *Erwinia*, *Xanthomonas*, *Pseudomonas*, and *Clavibacter*.

28. (original) The host cell according to claim 26, wherein the chimeric gene further comprises

a second DNA molecule encoding a secretion signal polypeptide, the second DNA molecule being operably linked between the promoter and the first DNA molecule.

29. (original) The host cell according to claim 26, wherein the promoter is a *gstI* promoter.

30. (previously presented) A transgenic plant resistant to disease resulting from oomycete infection, the transgenic plant comprising:

the chimeric gene according to claim 1, wherein the promoter induces transcription of the first DNA molecule in response to infection of the plant by an oomycete.

31. (original) The transgenic plant according to claim 30, wherein the chimeric gene further comprises

a second DNA molecule encoding a secretion signal, the second DNA molecule being operably linked between the promoter and the first DNA molecule.

32. (previously presented) The transgenic plant according to claim 31, wherein the second DNA molecule encodes a secretion signal polypeptide comprising the amino acid sequence of SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, or SEQ ID NO: 17.

33. (previously presented) The transgenic plant according to claim 32, wherein the second DNA molecule comprises the nucleotide sequence of nt 8-110 from SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, or SEQ ID NO: 16.

34. (currently amended) The transgenic plant according to claim 30, wherein the promoter is a *gstI* promoter comprising ~~the nucleotide sequence nt 295-567 of SEQ ID NO: 9 or promoter effective fragments thereof.~~

35. (original) The transgenic plant according to claim 30, wherein the oomycete is a species of *Plasmopara*, *Phytophthora*, *Peronospora*, *Pseudoperonospora*, *Bremia*, *Sclerospora*, *Aphanomyces*, *Pythium*, or *Albugo*.

36. (original) The transgenic plant according to claim 30, wherein the transgenic plant is selected from a group consisting of rice, wheat, barley, rye, cotton, sunflower, peanut, corn, potato, sweet potato, bean, pea, chicory, lettuce, endive, cabbage, cauliflower, broccoli, turnip, radish, spinach, onion, garlic, eggplant, pepper, celery, carrot, squash, pumpkin, zucchini, cucumber, apple, pear, melon, strawberry, grape, raspberry, pineapple, soybean, tobacco, tomato, sorghum, and sugarcane.

37. (original) The transgenic plant according to claim 36, wherein the transgenic plant is a grape plant.

38. (original) The transgenic plant according to claim 37, wherein the oomycete is selected from the group consisting of *Plasmopara viticola* and *Phytophthora parasitica*.

39. (original) The transgenic plant according to claim 36, wherein the transgenic plant is a tobacco plant.

40. (original) The transgenic plant according to claim 39, wherein the oomycete is selected from the group consisting of *Peronospora tabacina*, *Pythium* spp., and *Phytophthora* spp.

41. (previously presented) The transgenic plant according to claim 30, wherein the hypersensitive response elicitor protein or polypeptide is derived from a bacterial plant pathogen selected from the group consisting of *Erwinia*, *Xanthomonas*, *Pseudomonas*, and *Clavibacter*.

42. (original) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia amylovora*.

43. (previously presented) The transgenic plant according to claim 42, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising the amino acid sequence of SEQ ID NO: 3.

44. (previously presented) The transgenic plant according to claim 44, wherein the first DNA molecule comprises the nucleotide sequence of SEQ ID NO: 4.

45. (withdrawn) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia carotovora*.

46. (withdrawn) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia stewartii*.

47. (withdrawn) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Erwinia chrysanthemi*.

48. (withdrawn) The transgenic plant according to claim 47, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 1.

49. (withdrawn) The transgenic plant according to claim 48, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 2.

50. (withdrawn) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Pseudomonas syringae*.

51. (withdrawn) The transgenic plant according to claim 50, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 5.

52. (withdrawn) The transgenic plant according to claim 51, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 6.

53. (withdrawn) The transgenic plant according to claim 41, wherein the hypersensitive response elicitor protein or polypeptide is derived from *Pseudomonas solanacearum*.

54. (withdrawn) The transgenic plant according to claim 53, wherein the first DNA molecule encodes a hypersensitive response elicitor protein or polypeptide comprising an amino acid sequence of SEQ. ID. No. 7.

55. (withdrawn) The transgenic plant according to claim 54, wherein the first DNA molecule comprises a nucleotide sequence of SEQ. ID. No. 8.

56. (original) The transgenic plant according to claim 30, wherein the chimeric gene is stably inserted into the genome of the transgenic plant.

57. (previously presented) A method of making a recombinant plant cell comprising:

transforming a plant cell with the chimeric gene according to claim 1 under conditions effective to yield transcription of the first DNA molecule in response to oomycete-induced activation of the promoter.

58. (currently amended) A method of making a plant resistant to disease resulting from oomycete infection, the method comprising:

transforming a plant cell with the chimeric gene according to claim 1, whereby the transformed plant cell expresses the first DNA molecule in response to oomycete-induced activation of the promoter and

regenerating a plant from the transformed plant cell, wherein following expression of the first DNA molecule the regenerated plant is rendered resistant to disease resulting from oomycete infection ~~following expression of the first DNA molecule~~.

59. (previously presented) The method according to claim 58, wherein said transforming comprises inserting the chimeric gene into the genome of the plant cell.

60. (original) The method according to claim 58, wherein said transforming is *Agrobacterium* mediated.

61. (previously presented) The method according to claim 58, wherein said transforming comprises:

propelling particles at the plant cell under conditions effective for the particles to penetrate into the cell interior, whereby penetrating particles introduce an expression vector comprising the chimeric gene into the plant cell interior.

62. (original) The method according to claim 58, wherein the chimeric gene further comprises

a second DNA molecule encoding a secretion signal, the second DNA molecule being operably linked between the promoter and the first DNA molecule.

63. (original) The method according to claim 58, wherein the promoter is a *gst1* promoter.

64. (original) The method according to claim 58, wherein the oomycete is a species of *Plasmopara*, *Phytophthora*, *Peronospora*, *Pseudoperonospora*, *Bremia*, *Sclerospora*, *Aphanomyces*, *Pythium*, or *Albugo*.

65. (original) The method according to claim 58, wherein the transgenic plant is selected from the group consisting of rice, wheat, barley, rye, cotton, sunflower, peanut, corn, potato, sweet potato, bean, pea, chicory, lettuce, endive, cabbage, cauliflower, broccoli, turnip, radish, spinach, onion, garlic, eggplant, pepper, celery, carrot, squash,

pumpkin, zucchini, cucumber, apple, pear, melon, strawberry, grape, raspberry, pineapple, soybean, tobacco, tomato, sorghum, and sugarcane.

66. (original) The method according to claim 65, wherein the transgenic plant is a grape plant.

67. (original) The method according to claim 66, wherein the oomycete is selected from the group consisting of *Plasmopara viticola* and *Phytophthora parasitica*.

68. (original) The method according to claim 65, wherein the transgenic plant is a tobacco plant.

69. (original) The method according to claim 68, wherein the oomycete is selected from the group consisting of *Peronospora tabacina*, *Phytophthora* spp., and *Pythium* spp.

70. (previously presented) The method according to claim 58, wherein the hypersensitive response elicitor protein or polypeptide is derived from a bacterial plant pathogen selected from the group consisting of *Erwinia*, *Xanthomonas*, *Pseudomonas*, and *Clavibacter*.

71. (original) A transgenic plant seed obtained from the transgenic plant according to claim 30.

72. (original) A transgenic plant scion or rootstock cultivar obtained from the transgenic plant according to claim 30.

73. (currently amended) A chimeric gene comprising:
a first DNA molecule encoding a hypersensitive response elicitor protein or polypeptide derived from a bacterial plant pathogen, which protein or polypeptide is characterized by containing substantially no cysteine, being glycine rich, heat stable, hydrophilic, and capable of eliciting a hypersensitive response in non-host plants,

a *gst1* promoter operably linked 5' to the first DNA molecule to induce transcription of the first DNA molecule in response to activation of the promoter by an oomycete, and

a 3' regulatory region operably linked to the first DNA molecule.